City of Leipzig, Germany

Promoting livability through sustainable transportation

ICLEI Local Governments for Sustainability

Built at the intersection of the historic Via Regia and Via Imperii roads during the time of the Holy Roman Empire, Leipzig has a long history as a regional transport hub. Today, the City of Leipzig is seen as a global leader for its application of sustainable urban mobility principles and has been recognized as one of the most livable cities in Germany.

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Leipzig & ecomobility 'in context'

Located in the east of Germany in the former German Democratic Republic (GDR), the City of Leipzig experienced significant population fluctuations over the second half of the 20th century. The population decreased steadily from the 1960s to the end of the 1990s, with a rapid population decrease occurring post-1990 following the reunification of West and East Germany as a result of a significant out-migration to cities in western Germany.

Population levels stabilized in 1999, when the City of Leipzig expanded its administrative territory, and since 2001, the population of Leipzig has been steadily increasing. A 2011 report, which indicated a baseline population of 525,000, predicted that the population of Leipzig would reach 540,000 by 2020. However, in recent years the population growth rate has exceeded the predicted rate, and as of June 2017, the municipality is home to more than 585,000 inhabitants. Revised projections indicate that Leipzig will be home to approximately 720,000 inhabitants by 2030, making it the fastest growing major city in Germany in terms of population.

Part of this rapid growth can be attributed to the fact that Leipzig has earned the reputation of being one of the most livable and vibrant cities in Germany. The City's comprehensive, connected and reliable transport system is a major contributor to this livability.

Interventions adopted by the municipality include traffic calming in the city center, a hybrid electric bus fleet, bicycle and car sharing, and infrastructure improvement policies and measures aimed at enabling increased bicycling and walking. The City's bicycling and urban mobility planning has incorporated significant public participation in the development process; this is seen by the City as a major contributing factor to the success of its plans.

To guide future mobility developments, the City of Leipzig has developed a strategic urban mobility plan called the 'Urban Development Plan; Transportation and Public Space' (Stadtentwicklungsplan; Verkehr und öffentlicher Raum). The Plan, which was most recently revised in February 2015, advances a vision for Leipzig in 2030, as well as middle-range targets which can be evaluated in 2025. The most noteworthy and ambitious target in this Plan is to increase the cumulative modal split of walking, bicycling and public transportation to 70 per cent by 2030.

Facts & Figures

Population

585,000

Land area

297 km^2

Modal split (2015)

Walking: 25.4%
Bicycling: 17.3%
Public transportation: 17.6%
Personal automobile: 30.4%
Car-sharing: 9.3%

EcoMobility
An ICLEI Initiative

Leipzig is a participant in the EcoMobility Alliance

Description of activities

The City of Leipzig has deployed a wide range of interventions and policies to make sustainable mobility choices more convenient, efficient and accessible.

Public Transportation

Safe, accessible, inclusive and environmentally-friendly public transportation underpins the high quality of life in Leipzig. The city is home to the third largest tram network (150.3 km) in Germany, which is an impressive achievement considering that Leipzig is not among then ten largest cities in Germany by population and is ranked as the 8th largest by area. On the contrary, the City of Leipzig has adopted the compact city principle as part of its development strategy. The tram network consists of 13 routes travelled by 295 trams, with 518 stations distributed over the 150.3 km of track. roadway.

Tram stops are well integrated, both with the Leipzig Central Station - a major regional hub for long-distance train connections - as well as with other forms of local public transportation, including the 61 bus lines and 737 buses that serve the various districts of the city.

There are two actors responsible for the provision of public transportation in Leipzig. The first is the municipal transit operator, the Leipziger Verkehrsbetriebe (LVB), which is responsible for the bus and tram network, as well as the overall organization, planning and management of public transportation. The second is the Mitteldeutscher Verkehrsverbund (MDV), which coordinates regional transportation and cooperates with the LVB in a practical alliance that provides benefits for users in the form of integrated ticketing and coordinated public transit timetables across the region. The current the public transportation utilization rate in Leipzig is 0.63 trips per capita per day, with an average trip length of 5.6 km for all trips made within the city.

A key factor to increasing public transport ridership is to make it an accessible, efficient and inclusive mode of travel. The City and LVB have done this by designing tram stops which can be easily accessed, even on very busy streets, and which are barrier free in order to ensure accessibility for all citizens, specifically for those who may require additional assistance in getting on-and off the tram [*Image 1*].

Image 1: Even on a major street, an LVB tram is easily accessible and provides ample space for riders to embark and disembark Source: City of Leipzig

Traffic management

The City's commitment to sustainable transport has been accompanied by policy and infrastructure interventions aimed at reducing personal automobile use and making city streets more appealing for walking and bicycling. Presently, approximately 93 per cent of residential streets have speed limit of 30 km/h or less and the speed limit in the city center is 20 km/h. Regulations such as speed limits have been accompanied by limited access for personal automobiles in the city center and along selected major corridors in order to give preference to more sustainable modes of transportation.

Formerly, certain streets, such as Georg-Schumann-Straße, were heavily trafficked by cars, leaving very little space for bicycles, public transportation and greenery. In order to transform the street, space was taken away from automobile lanes and street parking and utilized to provide expanded bicycle lanes and footpaths, as well as space for trees. A number of streets located primarily within the city center have been designated as car-free in order to provide even more space to cyclists and pedestrians.

Image 2: Even during a snowy winter, bicyclists in Leipzig make sure that the space provided for securing bicycles outside of the Central Station is in use Source: City of Leipzig

Bicycling and walking

The efforts of the City of Leipzig to create ideal conditions for bicycling and walking are ongoing. In order to make the city more pedestrian friendly, footpaths are being expanded and made barrier-free, roads are being traffic-calmed, benches and rest-points are being installed and an increased number of crossing aids are being added. There are currently over 2500 km of walkways in Leipzig. When a street without a sidewalk exists, a speed reduction policy which drastically reduces the maximum automobile speed can be applied, transforming the street into a de facto walking zone ("Verkehrsberuhigter Bereich", VZ 325 StVO).

There are several administrative bodies working to enhance cycling conditions in Leipzig, some of which trace their origins back to the formation of a bicycling advocacy group formed in 1989. These bodies formally convene in a working group (the AG Radverkehrsförderung) which is led by a rotating “Cycling Commissioner in the City of Leipzig”.

Bicycle focused interventions include a successful bike-sharing program, 6,000 bicycle parking stands and two bicycle garages with 1,700 spaces [*Image 2*], over 461 km of dedicated bicycle lanes on city streets and an additional 500-600 km of bicycle paths through Leipzig's green spaces. Leipzig now has almost five times more cyclists compared to 20 years ago and is considered to be one of the most bicycle-friendly cities in Germany.

Public participation

Public participation is a fixture of Leipzig's sustainable mobility decision planning. For example, prior to the creation of a traffic calmed city center, public consultations were held and feedback was gathered from residents and experts. This was also the case for the Leipzig 2010-2020 Cycling Development Plan, where a two-year engagement process with citizens, associations, working groups and politicians was conducted before the City Council of Leipzig approved the plan in 2012.

Results

Shifting the modal split towards sustainable transportation

As the population of the City of Leipzig has grown, the modal split for bicycling has also increased: from 12.4 per cent in 2003 to 17.3 per cent in 2017. Coinciding with this increase, the number of pedestrianized streets in the city center has grown over 40 per cent from 2008 to 2013, the number of on street car parking spaces in the city center was reduced from 870 to 225 from 2008 to 2015, and the parking fee was doubled in 2011. The remaining parking spaces in the city center are mostly reserved mainly for the handicapped, logistics providers, taxis and motorbikes.

Under the current Urban Development Plan, the City of Leipzig is looking to decrease the modal split for motorized mobility to 30 per cent (currently 39.8 per cent) by 2025. In order to make this target a success, the City will encourage car-sharing in lieu of personal automobile use and hopes to decrease the modal split for the personal automobile to 22 per cent (currently 30.4 per cent) and the modal split for car-sharing to 8 per cent (currently 9.3 per cent). To achieve this, the City will improve its car-sharing facilities and will build 26 mobility stations for both bicycle and car-sharing [*Image 3*]. Accounting for multiple platforms, there are currently more than 12,000 car-sharing service members in Leipzig.

Image 3: Charged and ready for action; the City of Leipzig car-sharing service includes a fleet of electric vehicles Source: City of Leipzig

Creating a more livable city

Sustainable mobility in Leipzig has improved air quality in the city. Recent analyses carried out by TROPOS and LfULG indicate significant reductions of fine and ultrafine particles in the air around transport hubs within the city. This decline is linked to the impact of air pollution control measures, including the enactment of environmental zones in 2011. Within this area, only vehicles which meet certain emissions standards (indicated by a green sticker) are permitted. According to a recent poll, 79 per cent of the Leipzig population is either content or very content with the quality of life in the city.

Awards, recognition and knowledge sharing

As a result of its interventions across a number of thematic areas, including sustainable mobility, Leipzig won the German National Award for Sustainable Cities in 2012. The city was selected to host the OECD's 2015 International Transport Forum and named the most livable city in Germany by the Society for Consumer Research (Gesellschaft für Konsumforschung) in 2016. The City of Leipzig also shared its tram station design principles with Kumamoto, Japan as part of the World Cities Project, a city-to-city knowledge exchange project supported by the EU's Directorate General for Regional and Urban Policy.

Challenges and lessons learned

The improvement of the public transportation network, both in terms of technological improvements and physical expansion to provide better coverage, has been a key strategic intervention for the City of Leipzig. Nonetheless, the modal share for public transportation has only slightly increased: from 17.3 per cent in 2003 to 17.5 per cent in 2017. The City hopes that this figure will continue to increase and points to the integration of different modes of transport (transit multi-modality) as a measure that can contribute to increased public transportation ridership. Transit multi-modality allows the population to use a single form of payment for multiple forms of transport during a single trip.

Image 4:Street art which features parking signs that are no longer in use Source: Frank Vincentz, Creative Commons license

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Another hallmark of the mobility planning in Leipzig is the prominent presence of public participation throughout the process. Active public participation lends a number of advantages to mobility planning: it helps to ensure that plans and policies are aligned with the needs of end-users; increases the patience of residents during delays related to the construction of infrastructure or new facilities; and helps to affirm a sense of belonging and involvement to the city.

Moving forward, a major challenge will be integrating the travel behaviors of newcomers to the city - of which there are expected to be ca. 40,000 per year - into the existing and planned sustainable modes of transit in the city. In 2016, the City of Leipzig experienced an increase of 10 million passengers - from 138 million in 2015 to 148 million passengers in 2016 - on its municipal buses and trams. When considered in combination with the strategic goals for modal split, these figures indicate the need for continued enhancement of public transport infrastructure and services.

In addition to increased public transportation ridership, the City of Leipzig also expects bicycle ridership to double by 2030. This projected increase poses potential capacity problems for bicycle lanes, specifically at junctions with traffic lights. The increased number of bicyclists also indicates a need for more dedicated bicycle lanes and more structures for bicycle parking.

An additional challenge is to harmonize parking management for automobiles, balancing the need to provide less space for private automobiles while also providing an incentive for the uptake of electric vehicles. In many other cities around the world, electric vehicles receive priority status for parking. The City of Leipzig has celebrated its removal of conventional street parking places, going as far as establishing an art installation featuring parking signs which are no longer in use [*Image 4*]; however, the proliferation of electric vehicles may encourage different solutions.

References and further reading

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